

Title	Drawing machines, bathing machines, motorbikes, the stars...: where are the masterpieces?
Type	Article
URL	<a href="http://ualresearchonline.arts.ac.uk/3115/">http://ualresearchonline.arts.ac.uk/3115/</a>
Date	2011
Citation	Faure Walker, James (2011) Drawing machines, bathing machines, motorbikes, the stars...: where are the masterpieces? Tracey: drawing and visualisation research. ISSN 17423570
Creators	Faure Walker, James

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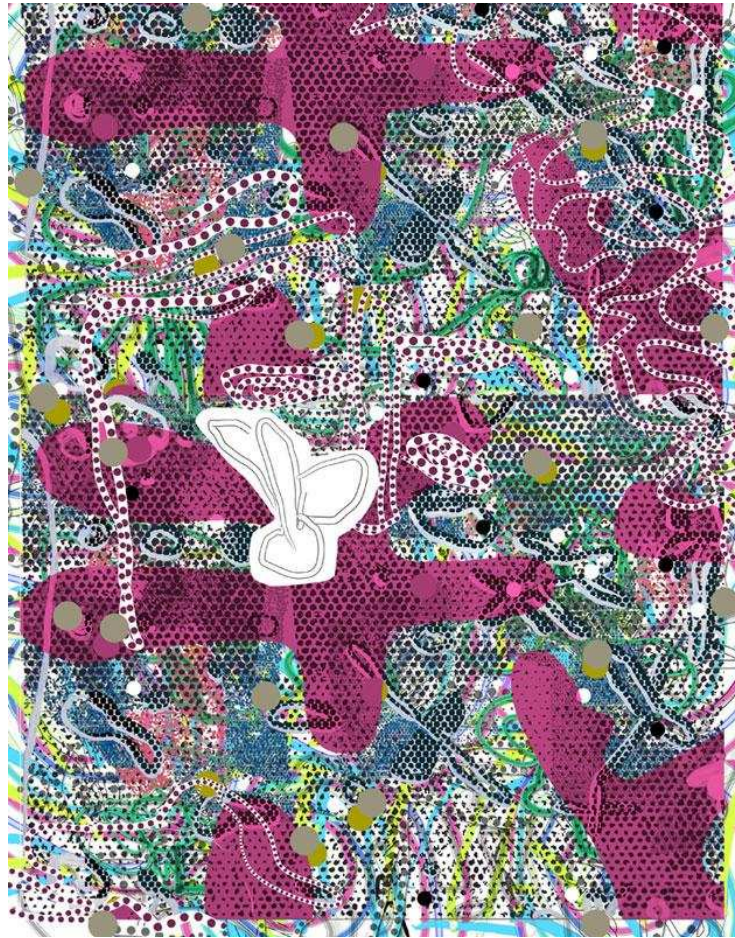
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## Drawing Machines, Bathing Machines, Motorbikes, the Stars....

### Where are the Masterpieces?

**James Faure Walker**



James Faure Walker, *Villa Dora* 2008, 41" x 34" (104 x 86 cms) archival inkjet print.

### 1. Digital Undefined

I am entering this discussion of drawing and technology with some misgivings. Should I assume that the term 'digital drawing' means something clear-cut, and that everyone knows what I am talking about? Probably not. Some think in terms of digital experiments – perhaps using Processing – and some think of drawings made by machines, or drawings made on smart phones. Others think about a process of scanning, filtering and then press the button and...

'print-out'. The terminology is full of bias. The word 'manipulate' sounds controlling, imposing, while 'drawing' is wholesome, like you are responding, sensitive to the world around you. 'Digital' means virtual, not really there, simulated, futuristic, not touchy-feely, not engaged with the whole history and texture of art. So, if the small talk of drawing conferences is anything to go by, I know that talking up 'the digital' won't win me many friends.

A brief resume: I have been in the habit of using drawing software, drawing tablets, cameras, printers, projectors, for over twenty years, and think of these ways of drawing as natural. This does not stop me using pen and paper, and carrying sketchbooks around, copying pieces in museums, or spending a fortune on top quality oil paint. The frustration comes with exhibitions. I have shown the same work in a drawing show, a print show, a painting show, and a digital show; it is only in the latter that the technicalities become the foreground issue. My mission has been to develop a seamless passage between the different palettes, and sometimes I get away with this – viewers wrongly assume 'digital' parts to be 'physical' and vice versa. But all this is not as it should be. You should not have to prove the viability of your medium. No one ever says, Oh, so you can actually be 'creative' using pencil and paper.

So when I find myself using this term I first of all have to stress that I don't necessarily share those somewhat negative associations. I don't even think there is a 'digital' kind of drawing that is distinct from 'traditional' drawing – whatever that is supposed to mean. Once you integrate the power of computing with the disciplines of painting and drawing you open up this spectacular new dimension. Why don't we just step in and make use of it? I had written a book in 2006, 'Painting the Digital River', that described how some of us found a way of navigating through the wonders of computer graphics and yet remained painters<sup>1</sup>. We are still 'painterly' painters too. My original plan was to follow this up with a similar book, shifting the emphasis to drawing. I discovered that there were some drawing books published in the 1900's, particularly those covering botany and wallpaper design, that had long remained in print and chimed in with the way drawing software was arranged. In one case a student treated Lewis Day's 1908 'Nature and Ornament' as a manual for Illustrator; he found the illustrations 'cool' but complained that the language was archaic<sup>2</sup>. The more I looked into this, and the more how-to-draw books I amassed, the more complicated the questions<sup>3</sup>.





James Faure Walker, *Rubicon* 2008, 68" x 96" (173 x 244 cms) oil on canvas.  
(includes borrowings from Chapman's 1873 'American Drawing-Book')

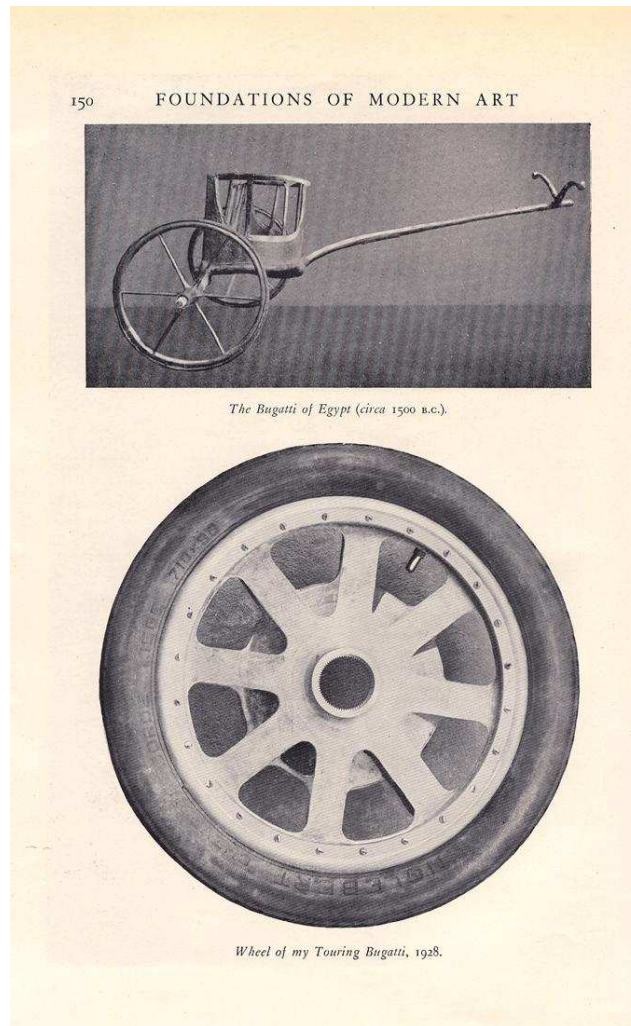
## 2. Drawing Manuals and Machines

In the first place, it appears there never was a time when everyone agreed about what to draw, or how to teach. Then, as now, there were competing ideas of what 'being able to draw' really meant. There were debates about the merits of drawing from memory versus drawing from observation; about copying drawings; about spontaneity; about line versus tone; about using a ruler for straight lines; about drawing in the studio or in the open air. How to draw books of that time included Rowney, or Winsor and Newton catalogues illustrating portable easels, pantographs, and ingenious drawing gadgetry. The airbrush was invented as early as 1879. Advertising depended on drawn illustrations, and innovations in reproduction processes fed into the way drawings were made. Generally, you sense a practical tone. They didn't need phenomenology, or the 'drawing as cognition' speculation of today's Drawing Research Network.

The Royal Academy banned how-to books from its premises, calling them Book Academies. The Establishment of the time may have looked down on 'trade' and on amateurs, but there was the occasional conversation. In 1905 Percy Bradshaw, postcard artist, cartoonist, teacher, prolific writer on drawing, founded the Press Art School, a correspondence college in South London. He ran it for fifty years. He also compiled some wonderful anthologies of advertising art. At one dinner, around 1929, hosted by the 'Thirty Club', he sat next to the President of the Royal Academy, Sir William Llewellyn, a portraitist. Bradshaw made a remark to the effect that you flatter princes, I sell pickles<sup>4</sup>. Llewellyn's works are quietly forgotten today, while Bradshaw's 'Art of British Advertising' is a goldmine sought out on eBay. We warm to the commercial drawing of the nineteen twenties, seeing it with eyes sensitised by Pop Art, while the loftily self-conscious academic draughtsmanship of the time leaves us cold.

This makes me wonder. Here and there I come across adverts today that promise you traditional 'drawing skills' by studying the nude. Skill for what purpose? I ask myself. Is it discipline for discipline's sake? Drawing for drawing's sake? Why the fixation on 'the figure?' It all seems at odds with the sheer variety and joy of the drawing of that period, where Brangwyn's interiors advertised Stephenson's floor polish, or Reginald Marsh drew cartoons for the New Yorker. Do we have to keep defining and redefining 'What Drawing Is', in order to show how liberal we are? Or to reduce it to some purist essence about mark-making – human, universal and timeless? Perhaps these are the truly boring properties of drawing, aspects that, unfortunately, sometimes get distilled into the thin abstraction of early computer drawings. But when it came to the more playful, and creative use of images, with the Amigas and Macs of the 1980's, it was usually graphic design that raced ahead, while fine art tottered on behind.

Microprocessors are all around us, and whether you are drawing, cooking or travelling on the underground the evidence is in your face. iPods, iPads, online news, mean that fewer and fewer people are reading newspapers on newsprint. Whether or not you make use of any of this gadgetry to record what you see, or to make drawings, the world that surrounds you is not what it once was. Will we end up drawing on e-paper? I don't think I will, but I recognize that soft pencil, washes and textured paper developed for seascapes and picturesque agriculture are not right for Piccadilly Circus. So the question of what you draw, how you



The Bugatti of Egypt (circa 1500 b.c.), Wheel of my Touring Bugatti, 1928. From Ozenfant, 1931 'Foundations of Modern Art'.

respond to the 'technology' of everyday scenery is bound up with the drawing tools you happen to choose. These are not new questions. Ozenfant's 1928 'Foundations of Modern Art' takes a broad sweep from pre-history, to microscopic images, to the flying-boat: he pondered how art could cope with the modern age of machines. One of his many striking visual juxtapositions cites the oldest technology, the wheel, comparing his 1928 Bugatti with an Egyptian chariot<sup>5</sup>.





Samuel Prout, 'Hints on Light and Shadow, Composition, etc., as applicable to Landscape Painting', Plate XII, 1876 edition.

A pedant will say that pencil and paper is a technology; that where, how and what you draw involves technology in one way or another; that what we perceive as 'nature', or as a 'machine', or as 'digital' is relative: it moves on from decade to decade. Back in his 1838 'Hints on Light and Shadow' Samuel Prout had described bathing machines on the beach as 'objectionable'. He advises interposing a figure as a distraction<sup>6</sup>. That way they blend in, no longer offending the sensibility. The wheel is one of the oldest technologies we have. I should mention that other wheel-based technologies had an impact on art. Bicycling transformed the sketcher's repertoire. In his popular 'Water Colour Painting' of 1918 Alfred Rich bicycles around the counties in search of the best watercolour subjects. He advises against motorcycles, because of their effect on the nerves, and because of shaking hands<sup>7</sup>.

### 3. Prototypes and Masterpieces

Turning away from these encounters between drawing and intrusive machinery, I notice that one of the questions asked here is 'where are the masterpieces of digital drawing?' Well, one answer could be straightforward: they are in museums. The Victoria and Albert Museum has

one of the most comprehensive holdings of computer drawings in the world, through the donations of Patric Prince<sup>8</sup>. There have been major exhibitions in the USA and Germany that collectively have come to define this field<sup>9</sup>. A consensus has emerged over the past ten years or so, and the same names crop up: Roman Verostko, Harold Cohen, Mark Wilson, Vera Molnar, Frieder Nake, Hans Dehlinger, Paul Brown, Casey Reas, Manfred Mohr, Anna Ursyn, for starters. Though well known within the field, and recently exhibited in the definitive exhibitions Digital Pioneers and Decode at the V and A, they may not be household names for the drawing community. These works, it should also be said, are distinctive as 'algorithmic' or 'generative' drawings, often made with a plotter, and have the look of geometric pen drawings. While not the first generation of computer artists – this is already fifty years old – they represent only one genre of digital drawing, the most recognizable form, the most researched by PhDs. These exhibitions were presented in the design category, and digital was the key term. You might argue that they were not drawings in the 'fine art' sense: they were not records of human seeing, feeling, making marks, or sketching out ideas. For the most part these images were abstract, and most could be filed under Late Constructivism.

Masterpieces? Possibly, but it depends on your point of view. It would be possible to mount a quite different 'digital' exhibition of much more fluid work, full of imagery, without any trace of constructivism, and without it being so pioneering, but then the digital origin would have been less prominent. Up to now that is the label that gains public recognition. In an ideal world we would be able to see many varieties of drawing in the same context. But surveys of contemporary drawing do not – so far – acknowledge that this body of achievement even exists. Exhibitions may include an animation, usually with a homemade feel, or a video, but these look like token 'non-slick' instances of 'new' technology. Nor do contemporary drawing anthologies and how-to books have much to say on the subject, and what they do say can be the voice of prejudice. This may soon change. There are many stunning images. Besides which, the task of integrating the processes of drawing with the complexities of computer graphics – especially before off-the-shelf programs were available – took great ingenuity and determination. You had no models to draw, and no models to follow, no tracks in the snow, and of course no tips from the past in the how-to-draw literature. But then again, this particular revolution was happening



off-stage, while the drawing world had other innovatory ideas to chew over - 'conceptual', 'post-modern', 'installation', 'performative'. It was all too



James Faure Walker, *Dark Filament* 2007, archival Epson print 44" x 53" (112 x 134 cms), (exhibited in the Digital Pioneers exhibition, 2009-2010, collection Victoria and Albert Museum).

easy to dismiss anything to do with computers as 'graphics'. Everyone could suppose that geeks couldn't draw and had nothing to offer in the way of authentic art.

#### 4. Outsider technologies

Being outside the 'fine art drawing tribe' was a little like being outside the Royal Academy circles in the twenties. Amateurs and commercial artists could take advantage of innovations that the purists regarded as low-caste gimmicks. They could sidestep the doctrines and work on their experiments with an open mind. Given the way the world around them was changing this meant they could be more in touch. In the twenties there were no Poussin drawings of Fords

and Hoovers, and in recent decades the first artists to 'go digital' were not sophisticated post-modern theorists, but the individuals who from the seventies on invented ways to exploit the power of the algorithm, or the power of the web. They surfaced at computer art conferences such as SIGGRAPH, ISEA, and Ars Electronica<sup>10</sup>.

You could put this another way, and say there are aspects of our everyday lives where a conventional sketchpad approach – drawing what you see in front of you – just breaks down. What used to be called 'cyberspace' does not obey the laws of perspective. That might seem improbable subject matter, but if you use drawing software as a matter of course, then you may well find you think of the visual field in terms of windows, layers, links, menus and hot spots. If students were set the self-portrait as a subject, would it be fair to insist that pencil and paper rather than Facebook provided the more revealing format? The point is, we gain nothing by being inflexible, and there are 'traditional' subjects where a mix of drawing devices is the best option: capturing movement, articulating pattern, drawing underwater, drawing the night sky, and so on. But, as I implied, to 'draw digitally' is not to set off down a one-way street, as if once you convert, you can't go back to the sketchbook. I have seen sketchbooks by



James Faure Walker, *Lisbon Faience Study*, 2010, 22" x 30" (59 x 76 cms), watercolour on paper.



some of the most prolific and apparently psychedelic 'digital' artists - Yoichiro Kawaguchi<sup>11</sup>, William Latham<sup>12</sup> and Ken Huff<sup>13</sup> are good examples – full of spectacular coiling plants and marine life. It is quite wrong to suppose that because an artist's work is 'digital', it is thereby less connected, or derived from the natural world. Some subjects are simply too small, too vast, or far too distant to draw with pencil and paper. Rob Kessler's amazing images of the micro world of seeds and pollen, discovered through the electron microscope, would be another case – and, again, he also draws plants directly<sup>14</sup>. Both sets of work, surely, can be counted in as drawings.

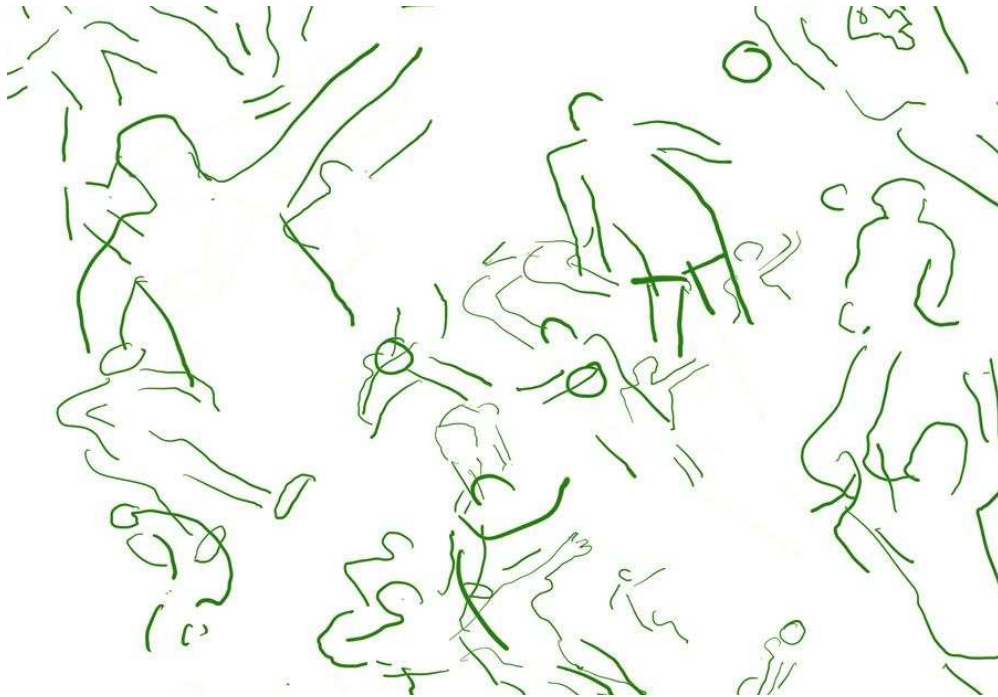
What I have said so far has been shaped by what I have learned from colleagues in the field, by trial and error, and from my tentative attempts at teaching this as a subject. I accept, however, that it will only be through example, through showing rather than telling, that this dimension of drawing will gain wide acceptance. I mention these three projects in that spirit. Each, I hope, is pragmatic rather than dogmatic in approach.

## **5. Drawing football, Drawing light years**

In the summer of 2009 I received an unexpected commission. I was one of five English artists selected to make a print celebrating the South African 2010 World Cup<sup>15</sup>. It was outside the football season. The only way of watching football was on the Internet. In this case it made sense to draw from the screen, reversing my usual practice. I drew rapidly with pen and paper, capturing characteristic gestures, the arms being as important as the feet. I distilled these into six posture types, just rectangles and circles. I had to comply with copyright conditions, and individual players, or nationalities could not be represented. I also realised that a straightforward illustration would run into problems of viewpoint. Most of us watch football on TV, from overhead, with fast cuts, close-ups, our attention guided by the camera, which tracks the ball. What I came up with was like an animation worked into the shifting pattern of a still image; alluding to constant movement within the defining rectangles of the pitch, penalty area, and goal. (I borrowed some of this from a Soviet fifties textile design I had photographed at an exhibition in Boston some years ago.) I might have arrived at the solution through



laborious collage, but the advantage of making it in paint programs was the speed of permutations I could run through. You can move shapes around as if they are fridge magnets.

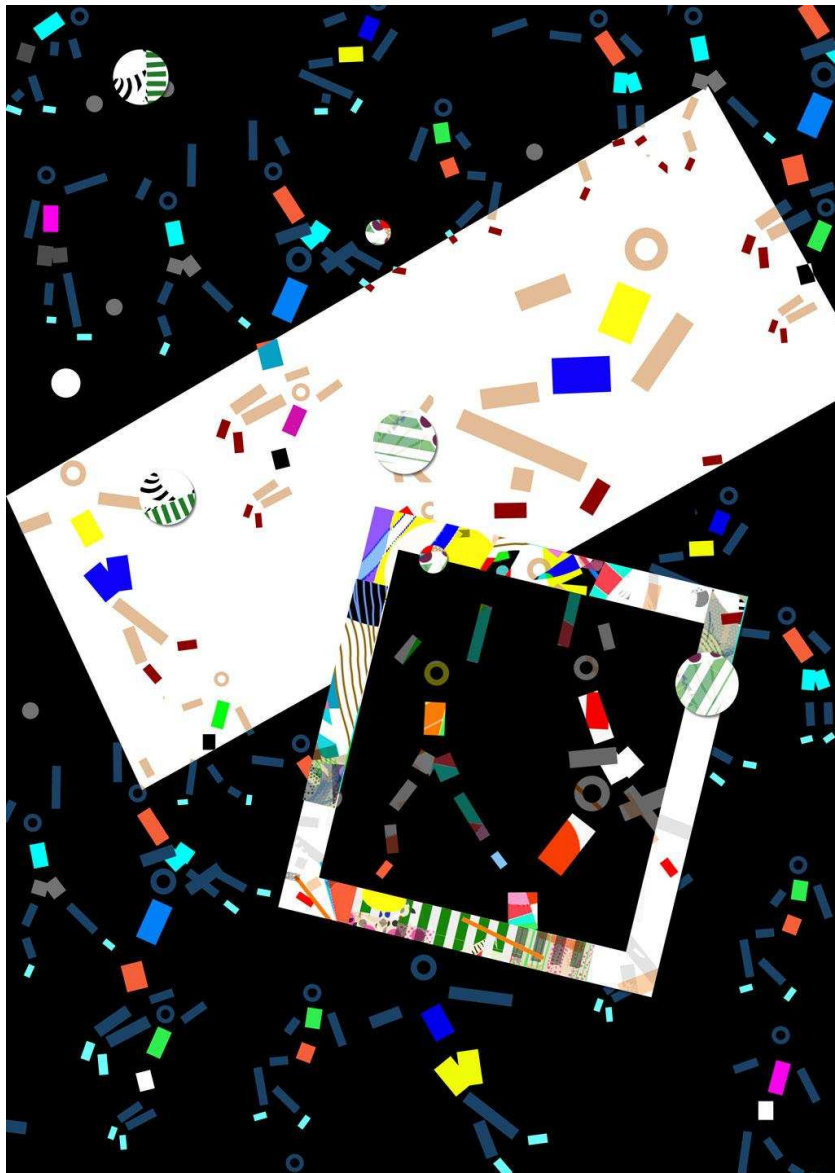


James Faure Walker, *Study for Up*, 2009 (digital transcription of first sketches).

Mistakes help the process. At one point I put a 700 percent scale change in instead of a 70 percent, and I got a full-face close-up.

The second case was a drawing jam session at the excellent 'Drawing Spaces' in Lisbon<sup>16</sup>. Three of us spent two weeks drawing each other, and in the evening sessions the public joined in and drew us as well. My colleagues, Ana Leonor Rodrigues and Pedro Seraiva, drew principally in pencil and pen, while I undertook to use a mixture of digital and other methods. Drawing in public was a real test. I depended on a laptop, scanner, projector, printer, as well as felt-tip and paper. I could take a photo, project it, transcribe it, then draw my colleague 'live' as well. I produced twenty large drawings. I stole images from my colleagues' drawings, as they did from mine. In comparing our approaches, I realised that the way I work was quite robotic, as if working against the clock, without the pauses for reflection, the half-closed eyes, the standing back, the adjustments and corrections you make when drawing with pencil and eraser. It is not

that I was driven by a plan, because I was constantly switching between motifs, editing out whole sections, making radical changes through the laptop, but I needed to move fast. It proved easier than I anticipated; it just added another instrument to the conversation. It also meant I could get away with a self-portrait drawn from behind.



James Faure Walker, *Up* 2009 (2010 Fine Art, South African World Cup commission) 33" x 24" (84 x 60 cms)  
archival inkjet print.



James Faure Walker, *Drawing Spaces Self-Portrait*, 2010, 30" x 40" (76 x 102 cms) felt-tip on paper.

The third case is more speculative: astronomy. With all the advantages, drawing via a tablet onto a screen can give you, it does make the process remote and sealed away. It is one of the limitations. But pencil and paper has its limitations too. When accuracy really matters that technique can be useless. Before photography, pencil drawing from the telescope was the best method, but such a drawing was really guess work; it could not compete with the photograph, a much more reliable witness; that in turn has given way to CCDs and to digital image processing (which 'see' in the more sensitive grey-scale, but use filters to reconstruct colour). This is a case where any personal, subjective or stylistic slant gets in the way. All you can now do with a pencil, it seems, is copy a 'representation', an image of an image. It is also a case where what is 'out there' is not at all easy to comprehend - at least in terms of renaissance perspective, which was never intended to measure distances in light-years, to render dark matter, or account for light-warping gravity. The hidden maths in paint programs may make them more in tune: through pattern creation, massive scale jumps, and complex textures, you





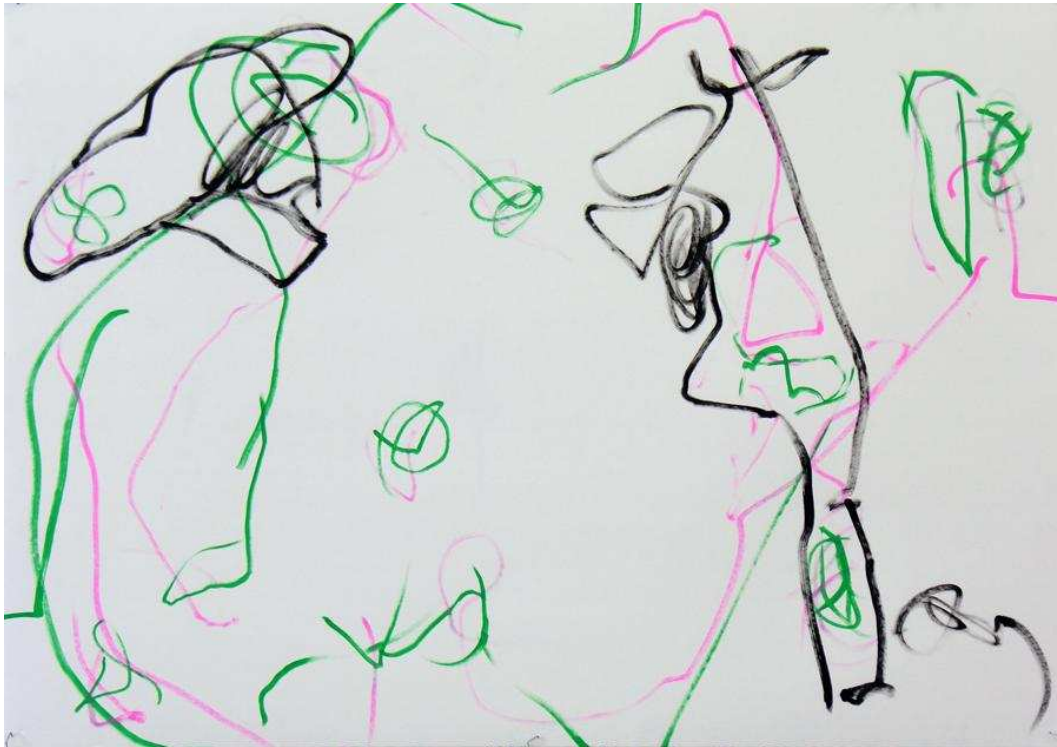
James Faure Walker, *Miniature Suite* 28" x 35" (71 x 89 cms) archival inkjet print.

may be able to build images that express the vastness. The mind-blowing images from the Hubble Telescope – called ‘astroporn’ by astronomers because they seduce politicians into providing the funding – only show one interpretation of the available data<sup>17</sup>. It could be ‘drawn’ in many other ways. This might be primarily a specialized corner of visualisation, or it might be just about drawing the night sky. But for those of us who enjoy tackling something out of the ordinary, it is a gift.

## 6. Afterthought

A final comment on this subject of drawing and technology, which brings me full circle. The way life-drawing was taught in the 1960's – and I had the full range from the Coldstream dot and carry method to Leon Kossoff's emotional drama – was in fact quite mechanical: the emphasis was on looking at the model, absorbing the experience, submitting to the discipline. You worked like a drawing machine: look, record, correct. Nowadays we might want to

emulate the thinking power, the reach of the computer. Alternatively, we might be prompted to find the most immediate method, zen-like drawings living entirely in the present moment, drawings too fast for thought, automatic drawings with no stopping and starting, pure real-time calligraphy.



James Faure Walker, *Impro 2*, 2010, 24" x 34" (61 x 86 cms) felt-tip on paper.

<sup>1</sup> Faure Walker, J, 2006, 'Painting the Digital River: How an Artist Learned to Love the Computer', Prentice Hall, New Jersey, USA.

<sup>2</sup> For links between drawn and algorithmic derived ornament see 'Computer-Generated Floral Ornament', International Conference on Computer Graphics and Interactive Techniques, Proceedings of the 25th annual conference on Computer graphics and interactive techniques, pages 423 - 434, Wong M., Zongker D., Salesin D., ACM Press New York, 1998.  
<http://portal.acm.org/citation.cfm?id=280948>

<sup>3</sup> Some of the points made in this essay follow on from these essays: 'Pride, Prejudice and the Pencil' in Steve Garner, 'Writing on Drawing: Essays on Drawing Practice and Research', Intellect/ University of Chicago, October 2008); 'A Drawing Book for Digital Eyes', chapter in 'Linha do Horizonte' (2), edited by Professor Ana Leonor Rodrigues, a book/journal on Drawing published in Portuguese and English, to be published 2011; 'On Not Being Able to Draw a Mouse-Trap', International Journal of Creative Interfaces and Computer Graphics (IJCICG), Visualization Aesthetics, Criticism, and Design, (Special Issue, Spring 2011):  
<http://www.igi-global.com/Bookstore/TitleDetails.aspx?TitleId=1161>

<sup>4</sup> Bradshaw, P.V., 1943, 'Drawn from Memory', Chapman and Hall, London, p. 153. "At the Dinner, in a speech thanking him (Sir William Llewellyn PRA (1928-1938)) for joining us, I asked him to drop a sympathetic tear for those of us who were humbler members of his profession, and who, while he was producing portraits of Royalty, had to derive artistic inspiration from rhubarb, or while he was painting Politicians had to suggest the pictorial fascination of pickles." The 'Thirty Club of London' had been established for 'The Betterment of Advertising'.

<sup>5</sup> "Natural forms are mechanistic, for they are the product of universal forces. And these very forces are in their turn transformed by mechanism. The honeybee is a relay that nature uses: mankind, too, is a relay like the bee: machines are relays created by man, and the collaboration of men and machines creates natural objects which artificially we call artificial. Doubtless the bee considers its honey artificial. But does anything exist that can be called unnatural?"  
From Ozenfant, A., 1931 'Foundations of Modern Art', John Rodker, London. Page 151.

<sup>6</sup> "In the first subject, the forms of the bathing-machines are, by themselves, objectionable, and, to adapt them for a picture, the introduction of some additional circumstance was necessary to increase the interest: the single figure is essential to lead off the attention from the centre group." Samuel Prout, 'Hints on Light and Shadow, Composition, etc., as applicable to Landscape Painting', James Rimell and Son, 1876 edition (originally 1838), Plate XII.

<sup>7</sup> "Incidentally, I may remark that that I never found any hand-shaking after even a long bicycle-ride, but I have never tried a motor-cycle, as I do not like them, and believe them to be very bad from a health point and likely to provoke any amount of hand-shaking and nerves." Alfred W. Rich, 'Water Colour Painting', 1918, Seeley, Service and Co, London, in 'Sussex', page 85.

<sup>8</sup> Details can be found at: [http://www.vam.ac.uk/collections/prints\\_books/features/computer-art/index.html](http://www.vam.ac.uk/collections/prints_books/features/computer-art/index.html)  
See Beddard, H., Dodds, D., 2009, 'Digital Pioneers' (V&A Pattern), V & A Publishing.

<sup>9</sup> <http://dam.org/exhibitions/plotter-drawings-from-1960s>  
<http://dada.compart-bremen.de/error.html#>  
<http://onl.zkm.de/zkm/e/>

<sup>10</sup> Archives of past exhibitions, and useful sources can be found at:  
<http://www.siggraph.org/programs/artdesign>  
<http://www.isea-webarchive.org/portal/>  
[http://www.aec.at/index\\_en.php](http://www.aec.at/index_en.php)

Recent comprehensive surveys include:

Wands, B., 2006, 'Art of the Digital Age', Thames and Hudson, London.

Colson, R., 2007, 'The Fundamentals of Digital Art', AVA Publishing.

Shanken, E. A., 2009, 'Art and Electronic Media', Phaidon Press Ltd.

Lieser, W., 2010 'The World of Digital Art', H.F. Ullmann.

<sup>11</sup> <http://dam.org/artists/phase-one/yoichiro-kawaguchi>

<sup>12</sup> <http://www.doc.gold.ac.uk/~latham/>

<sup>13</sup> <http://www.itgoesboing.com/>

<sup>14</sup> <http://www.robkesseler.co.uk/>

<sup>15</sup> <http://www.2010fineart.com/index.php>

<sup>16</sup> Espacos do Desenho/ Drawing Spaces, February 3 to 20 2009. "The draughtswomen/men draw one another + P2 - duplicate, Ana Leonor Rodrigues, James Faure Walker and Pedro Saraiva. During the period of 10 days, three artists draw and portray one other obsessively."

<http://drawingspacesen.weebly.com/archives.html>

<sup>17</sup> See <http://www.aestheticsofastrophotography.co.uk/>